

Factors associated with (non-)participation of cancer survivors with job loss in a supportive return to work program

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Abstract

Purpose To evaluate and implement supportive programs, it is important to understand which cancer survivors (CSs) are participating in these programs and which motives exist for declining participation. Recently, a supportive return-to-work (RTW) program was offered to CSs with job loss. The purpose of this study was to identify factors and motives associated with (non-)participation of CSs with job loss in the RTW program.

Methods In this cross-sectional study ($N = 286$), information on socio-demographic, health-related, psychosocial, and work-related characteristics of CSs in the program was collected. Similar data were collected from those who declined participation. Multivariable logistic regression analyses were conducted ($p < 0.05$) to identify factors associated with (non-)participation. Motives for declining participation were identified using descriptive analysis.

Results Being married (odds ratio (OR) 0.23; 95 % confidence interval (CI) 0.08–0.69) or living together (OR 0.25; 95 % CI 0.07–0.96) decreased the likelihood of participation in the RTW program. Having a temporary

employment contract prior to unemployment (OR 2.60; 95 % CI 1.20–5.63), a clear intention to RTW (OR 2.65; 95 % CI 1.20–5.82), and higher scores on a readiness to RTW instrument, i.e., contemplation scale (OR 2.00; 95 % CI 1.65–2.40) and prepared for action–self-evaluative scale (OR 1.27; 95 % CI 1.04–1.54), increased the likelihood of participation. Physical (50 %) and mental problems (36 %) were leading motives for declining participation.

Conclusions The results from this study help to distinguish CSs that may not need RTW support, from those who are most in need of RTW support. Practitioners and researchers should tailor RTW support to CSs' socio-demographic, health-related, and work-related characteristics.

Keywords Cancer survivors · Unemployment · Return to work · Intervention · Participation

Abbreviations

CS(s) Cancer Survivor(s)
RTW Return To Work
RTC Randomized Controlled Trial
SSA Social Security Agency

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Introduction

Annually, 1.7 million persons at working age (15–65 years) are diagnosed with cancer in the European Union, of which 40,000 in the Netherlands [1, 2]. For most cancer survivors (CSs), motivation for work participation remains during and/or after treatment [3, 4]. Eventually, 64 % of CSs return to work (RTW) [5]. However, a considerable part of CSs does not RTW. That is, CSs' work ability may be affected by long-

term or permanent health problems, such as fatigue or cognitive impairments [6–8]. Further, other cancer-related, psychosocial, and work-related factors, e.g., an unfavorable cancer prognosis and lack of support from employer and colleagues, may reduce the chance of RTW [9].

RTW can be especially challenging for CSs who become unemployed [10]. Between 26 and 53 % of CSs lose their job or quit working during or after treatment [5]. In Western countries, these percentages have been increasing [11], which is partly explained by the increasing popularity of temporary employment contracts among employers [12] and the rising retirement age [13]. In the Netherlands, CSs who become unemployed during sick leave can apply for financial support, i.e., sickness benefits, at the Social Security Agency (SSA). These benefits partly cover the former salary, with a maximum of 2 years. During sick leave, RTW options are limited for CSs with job loss, as they lack support from an employer and colleagues, as well as opportunities for gradual RTW [14, 15]. In contrast, CSs with a fixed employment contract benefit from employment security during the first 2 years of sick leave, i.e., a certain level of financial stability, RTW support, and options for workplace accommodations. Given this contrast, the RTW process of CSs with job loss may be more complicated than the RTW process of employed CSs [10]. To support Dutch CSs with job loss, a supportive RTW program was recently developed and offered in an experimental setting [16].

When offering supportive programs to CSs, it is important to consider the role of (non-)participation, as generally only a selection of the invited CSs participates in these programs [17]. For example, with regard to supportive RTW interventions for CSs in the Netherlands, in a previous hospital-based supportive RTW program for female CSs, 74 % signed up to participate [18]. Further, in a study evaluating the effects of a high-intensity physical rehabilitation program on RTW for CSs who had received chemotherapy, 85 % was interested to partake [19]. So far, factors and motives associated with (non-)participation of CSs have mainly been studied within the context of clinical trials, i.e., trials in which new cancer treatments are evaluated [20, 21]. However, the circumstances for participation in clinical studies differ from those for participation in studies offering supportive programs. That is, clinical studies take place in a different setting, i.e., laboratory or hospital, and may appeal to a different kind of motivation for participation, e.g., receiving experimental treatment or financial incentives.

Evaluating (non-)participation in supportive programs for CSs may provide information to optimize recruitment procedures and facilitate proper interpretation of the effects of these programs. Therefore, the aim of the current study is to identify factors and motives associated with (non-)participation of CSs with job loss in a supportive RTW program.

Methods

Design

In this cross-sectional study, we used data from CSs with job loss, invited to participate in a supportive RTW program within a randomized controlled trial (RCT). Questionnaire data of CSs interested to participate in the RTW program were collected, as well as data from CSs who declined participation, who were willing to complete a one-time questionnaire. The SSA provided additional data from all invited CSs, for comparison between participants and non-participants. The study procedures of the RCT have been published previously [16].

Study population

CSs with job loss were eligible for participation in the RTW program if they were registered at the SSA as recipients of sickness or disability benefits for a period of 12–36 months after first day of sick leave. Furthermore, eligible CSs were 18 to 60 years old, had completed intensive cancer treatment at least 6 weeks prior to the start of the RTW program, and were free of comorbidities that interfered with participation (based on report by CSs' general physician). Also, their health had to be sufficient to participate (based on self-report). CSs were excluded from participation in case of the following: a lack of knowledge of the Dutch language, a conflict with the SSA regarding a (previous) benefits claim, and (registration for) participation in a concurrent scientific study and/or supportive program.

Study procedure

CSs with job loss were recruited through the SSA registries. Invitations were sent by mail to potentially eligible CSs, throughout the Netherlands, from April 2013 to January 2015. The invitation included an information flyer, a screening questionnaire, an informed consent form, and a postcard. CSs who were interested in participation in the RTW program could respond by returning the screening questionnaire and informed consent form. The researchers checked the inclusion and exclusion criteria during a telephone conversation, after which eligible CSs received a baseline questionnaire and a second informed consent form. After returning the baseline questionnaire and informed consent form, CSs were included in the study. After returning the baseline questionnaire and informed consent form, CSs were included in the study. At this point, an information letter was sent to CSs' general physician, to inform them about the study and ask them to notify the researchers of any comorbidities that could interfere with participation in the program. If so, the researchers would deliberate with the physician whether or not the program was appropriate. CSs could also decline by returning a postcard, on which they could indicate personal or predetermined

motives for declining, e.g., “I am experiencing physical health problems” or “I have already found a new job.” Further, CSs could disclose on the postcard whether they were interested in completing a one-time questionnaire. CSs who were interested received this questionnaire, including an informed consent form, shortly after their decline. The one-time questionnaire for non-participants in the supportive program was identical to the baseline questionnaire for participants.

The supportive RTW program

The supportive RTW program was developed as a tailored program, i.e., the more support CSs needed, the further they proceeded in the program. Participating CSs were supported by reintegration professionals to develop a consensus-based RTW plan, which included coaching on various themes, e.g., RTW planning or coping with cancer, and actual job placement. A detailed description of the supportive RTW program has been published previously [16].

Measurements

The dependent variable of the current study is participation (yes; no) in the supportive RTW program. Independent variables potentially associated with the dependent variable were as follows:

- Socio-demographics: age (in years), gender (male; female), level of education (no education/primary school/lower vocational education; secondary school; vocational education/upper secondary school; upper vocational education/university), principal wage earner (yes; no), marital status (single; married; living together with partner, children and/or others; divorced/widowed), having children (yes; no), and ethnicity (Dutch; non-Dutch).
- Health-related and psychosocial variables: tumor type, treatment modalities (no treatment; surgery; radiotherapy; chemotherapy; hormone therapy; immunotherapy; other treatment (yes; no)); being declared free of disease by physician/specialist (yes; no), comorbidity (yes; no), levels of depressive symptoms (assessed using Centre for Epidemiological Studies Depression Scale (CES-D), of which the scores were dichotomized, using the predetermined cutoff point of >16 points to indicate risk of clinical depression [22–24]), fatigue (assessed using the Functional Assessment of Chronic Illness Therapy Fatigue Scale (FACIT-Fatigue)) [25], coping preferences (assessed using the Utrecht Coping List (UCL)) [26], and general health and quality of life (levels of functioning), i.e., physical emotional, social, cognitive, and role functioning; sleeping problems; and financial problems due to illness (assessed using the European Organization for

Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ C-30)) [27].

- Work-related variables: characteristics of previous job, i.e., type of sector (blue collar; white collar; civil servant; health care worker), working hours (hours/week), shift work (yes; no), managerial tasks (yes; no), type of job demands (psychological; physical; both), and type of employment contract (fixed; temporary; temporary agency work; other). Further, total number of years working, level of perceived work ability compared to lifetime best (assessed using the Work Ability Index (WAI)) [28], participation in society, e.g., participation in voluntary work, studies, and daily activities (assessed using the Utrecht Scale for Evaluation of Revalidation and Participation (USER-P), containing three scales: frequency of participation, restrictions in participation, and satisfaction with participation [29]), and readiness to RTW (assessed using the Readiness to RTW instrument (RRTW)) [30], related to the five stages of change that are described in the transtheoretical model by Prochaska and DiClemente [31], and intention to RTW (uncertain or no intention to RTW; clear intention to RTW) (assessed using the Attitudes-Social influence-self-Efficacy questionnaire (ASE)) [32].

Statistical analyses

Descriptive analyses, *t* tests, and chi-square tests were used to describe differences in self-reported socio-demographic, health-related and psychosocial, and work-related characteristics of participants (interested in the RTW program) and non-participants who completed the one-time questionnaire.

Further, the SSA provided data regarding age, gender, and cancer diagnosis for all invited CSs. *t* tests and chi-square tests were used to study potential differences in characteristics among CSs in four groups, i.e., (1) participants (CSs interested to participate in the RTW program), (2) non-participants who completed the one-time questionnaire, (3) non-participants who only returned the postcard, and (4) CSs who did not respond to the invitation at all.

To construct a multivariable hierarchical model for participants and non-participants (one-time questionnaire), first, univariate analyses between the independent variables and the dependent variable, i.e., (non-)participation in the RTW program, were conducted. All variables with *p* value <0.2 were considered for the model and tested for multicollinearity before continuing analysis. Variables with correlation coefficients of <-0.8 or >0.8 were removed from the analyses [33].

Using multiple logistic regression analysis, variables were entered into one of three cluster models, i.e., socio-demographic, health-related and psychosocial, or work-related model. All variables with a *p* value <0.1 in the cluster models were considered eligible for the multivariable model. The final

multivariable model had a cutoff point of p value <0.05 . Goodness of fit of the model was described using Nagelkerke R -squared.

Using descriptive statistics, motives for declining to participate in the supportive RTW program were analyzed. SPSS version 20.0 was applied to conduct the analyses [34].

Results

Characteristics of (non-)participants

Of the 2757 invited CSs with job loss, 786 (29 %) were interested to participate in the supportive RTW program, of whom 171 met the inclusion criteria. Six hundred forty-seven CSs (23 %) declined participation by returning the postcard. Of these, 115 (18 %) completed the one-time questionnaire. One thousand two hundred eighty-four CSs (47 %) did not respond to the invitation at all (Fig. 1).

The mean age of participants in the RTW program was 48.4 years (SD 8.6), 69 % was female, 57 % was the principal wage earner, and 48 % was married. In the group of non-participants (one-time questionnaire), the mean age was 50.9 (SD 8.9), 66 % was female, 45 % was the principal wage earner, and 65 % was married. In both groups, over 90 % had the Dutch nationality, and the majority (39–40 %) had suffered from breast cancer (Table 1).

Using the SSA data, we found no significant differences in gender between participating CSs and any of the non-participating CSs. Participating CSs were significantly younger than non-participants who completed the one-time questionnaire (mean difference (MD) 2.6 years; $p = 0.015$) and non-participants who only returned the postcard (MD 1.9 years; $p = 0.012$). CSs who did not respond to the invitation at all were significantly younger compared to the other CSs, i.e., participants (MD 2.6 years; $p < 0.001$), non-participants (one-time questionnaire) (MD 4.8 years; $p < 0.001$), and non-participants (postcard only) (MD 4.6 years; $p < 0.001$). Also, the proportion of breast CSs was significantly lower in CSs that did not respond to the invitation at all than participants ($p < 0.001$), non-participants (one-time questionnaire) ($p = 0.014$), and non-participants (postcard only) ($p = 0.015$). The proportions of other cancer diagnoses in the groups were too small for analysis.

Factors associated with (non-)participation in the RTW program

Questionnaire data from participants ($N = 171$) and non-participants (one-time questionnaire) ($N = 115$) were merged into a sample of 286. The univariate analysis identified 31 factors associated with (non-)participation in the RTW program (Table 1). These factors were considered for multiple

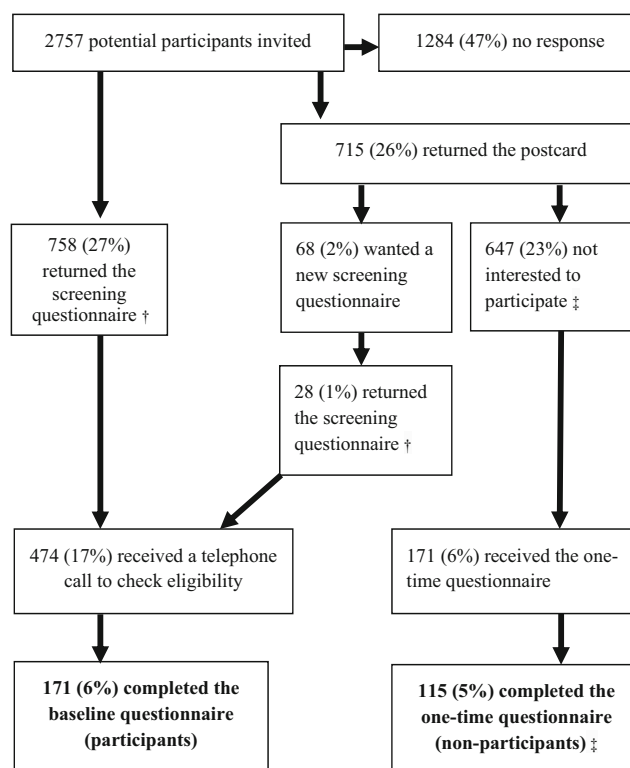


Fig. 1 Recruitment flow diagram. Percentages were calculated from the number of potential participants invited ($N = 2757$). Combined percentages mentioned in the text may differ by 1 % because of rounding differences; †786 CSs were interested to participate in the program, calculated as the sum of 758 and 28 returned screening questionnaires; ‡ 532 CSs only returned the postcard (calculated as the difference between 647 CSs who returned the postcard and the 115 CSs who returned the postcard and the one-time questionnaire)

regression analysis within their cluster, i.e., socio-demographic, health-related and psychosocial, or work-related cluster. The factors “diagnosis: skin cancer/melanoma” and “treatment modalities: no treatment” were removed due to the low number of cases.

In the cluster models, 11 factors were associated with a lower chance of participation in the RTW program, i.e., higher age, marital status (married or living with someone), having had lung cancer and/or surgery, having no/an unclear intention to RTW, having had a fixed employment contract, having had both physically and psychologically high demands in a previous job, and lower scores on various scales, i.e., physical functioning, coping preference—active tackling, readiness to RTW—contemplation phase, and readiness to RTW—prepared for action—self-evaluative phase. These factors were entered into a multivariable model (Table 2).

The multivariable model showed that CSs with job loss who were married (odds ratio (OR) 0.23; 95 % confidence interval (CI) 0.08–0.69) or living together (OR 0.25; 95 % CI 0.07–0.96) were significantly less likely to participate than CSs living alone. CSs who had a temporary employment contract prior to job loss were significantly more likely to

Table 1 Characteristics of (non-)participating CSs with job loss in a supportive RTW program

Group	Variable	Categories	Participants (<i>N</i> = 171) Mean (SD)	Non-participants (<i>N</i> = 115) Mean (SD)	<i>P</i> value ^a		
Socio-demographics	Age (years)		48.4 (8.6)	50.9 (8.9)	0.015		
			<i>N</i> (%) ^b	<i>N</i> (%) ^b			
	Gender	Male		53 (31)	39 (34)	0.569	
		Female		118 (69)	75 (66)		
	Level of education	None/primary/lower vocational education		30 (18)	31 (27)	0.106	
		Secondary school		28 (16)	24 (21)		
		Vocational education/upper secondary school		60 (35)	31 (27)		
		Upper vocational education/university		53 (31)	28 (25)		
	Principal wage earner	No		74 (44)	61 (55)	0.061	
		Yes		96 (57)	50 (45)		
	Marital status	Living alone		36 (21)	13 (11)	0.031	
		Married		81 (48)	74 (65)		
		Living together		28 (17)	16 (14)		
		Divorced/widowed		24 (14)	11 (10)		
Having children	No		59 (35)	29 (25)	0.095		
	Yes		112 (66)	86 (75)			
Ethnicity	Dutch		163 (95)	105 (91)	0.170		
	Non-Dutch		8 (5)	10 (9)			
Health-related and psychosocial factors	Tumor type	Breast	68 (40)	45 (39)	0.914		
		Lung	3 (2)	11 (10)	0.003		
		Gynecological	7 (4)	2 (2)	0.263		
		Colon	13 (8)	9 (8)	0.944		
		Gastro-intestinal	10 (6)	5 (4)	0.577		
		Head and neck	8 (5)	4 (4)	0.620		
		Skin/melanoma	0 (0)	4 (4)	0.014		
		Prostate	3 (2)	5 (4)	0.192		
		Hematological	23 (14)	7 (6)	0.046		
		Brain	8 (5)	7 (6)	0.600		
		Other type of cancer	24 (14)	9 (8)	0.107		
		Cancer recurrence	4 (2)	7 (6)	0.106		
		Treatment modalities	No treatment		2 (1)	0 (0)	0.247
			Surgery		124 (73)	93 (82)	0.079
	Radiotherapy			84 (49)	51 (45)	0.468	
	Chemotherapy			109 (64)	70 (61)	0.689	
	Hormone therapy			47 (28)	25 (22)	0.290	
	Immunotherapy			13 (8)	7 (6)	0.636	
	Declared free of disease	Other type of treatment		13 (8)	5 (4)	0.274	
		No		56 (33)	49 (44)	0.063	
	Yes		113 (67)	62 (56)			
	Comorbidity	No		87 (51)	46 (40)	0.081	
		Yes		84 (49)	68 (60)		
	Depression	No depressive symptoms		101 (59)	68 (60)	0.968	
		At risk of depression		69 (41)	46 (40)		
	Fatigue			Mean (SD)	Mean (SD)		
		(0–52)		33.0 (9.8)	30.0 (11.2)	0.018	
Coping	Active tackling (7–28)		18.6 (3.9)	17.0 (3.6)	0.001		
	Seeking social support (6–24)		13.3 (4.0)	13.2 (3.4)	0.705		

Table 1 (continued)

Group	Variable	Categories	Participants (<i>N</i> = 171) Mean (SD)	Non-participants (<i>N</i> = 115) Mean (SD)	<i>P</i> value ^a	
	Health-related quality of life (levels of functioning)	Palliative reacting (8–32)	18.7 (3.4)	17.9 (3.3)	0.050	
		Avoiding (8–32)	16.4 (3.5)	16.6 (3.2)	0.631	
		Passive reacting (7–28)	12.7 (3.3)	12.3 (3.3)	0.320	
		Reassuring thoughts (5–20)	12.5 (2.6)	12.4 (2.4)	0.779	
		Expression of emotions (3–12)	6.0 (1.7)	5.8 (1.7)	0.290	
		Quality of life(0–100)	63.7 (17.3)	53.5 (21.1)	0.000	
		Physical functioning (0–100)	78.8 (14.8)	68.4 (20.7)	0.000	
		Emotional functioning (0–100)	64.1 (25.0)	64.2 (26.3)	0.947	
		Social functioning (0–100)	69.0 (26.0)	60.2 (26.6)	0.006	
		Cognitive functioning (0–100)	66.5 (26.9)	64.7 (25.5)	0.590	
		Role functioning (0–100)	63.1 (26.4)	54.5 (28.7)	0.010	
		Sleeping problems (0–100)	37.8 (33.8)	44.1 (33.4)	0.126	
		Financial problems (0–100)	40.6 (35.6)	37.8 (32.1)	0.495	
		Work-related factors	Type of sector previous job	<i>N</i> (%) ^b		
Blue collar	12 (7)			11 (10)	0.616	
White collar	58 (35)			43 (39)		
Civil servant	56 (33)			35 (32)		
Health care worker	42 (25)			22 (20)		
Type of previous employment contract	Fixed employment			49 (23)	55 (50)	0.001
	Temporary employment			95 (57)	41 (37)	
	Temporary agency work			21 (13)	10 (9)	
	Other type of contract			2 (1)	5 (5)	
Shift work previous job	No			51 (30)	36 (32)	0.727
	Yes			118 (70)	77 (68)	
Managerial tasks previous job	No			134 (79)	90 (80)	0.942
	Yes			35 (21)	23 (20)	
Previous job demands	Psychological and physical			51 (30)	46 (42)	0.030
	Mainly psychological			73 (44)	31 (28)	
	Mainly physical			44 (26)	33 (30)	
Intention to RTW	Uncertain or no intention to RTW			49 (29)	72 (64)	0.000
	Clear intention to RTW			122 (71)	40 (36)	
Total number of years working				Mean (SD)	Mean (SD)	0.038
Working hours a week previous job				24.1 (10.1)	26.7 (10.5)	
Work ability	(0–10)			28.9 (11.5)	27.3 (11.9)	0.246
Participation in daily activities	Frequency of participation (0–100)			4.6 (2.0)	3.3 (2.5)	0.000
	Restrictions in participation (0–100)	32.1 (8.2)	28.9 (10.9)	0.006		
	Satisfaction with participation (0–100)	81.8 (13.8)	75.4 (18.5)	0.001		
Readiness to RTW stages	Precontemplation (1–15)	63.5 (15.2)	62.3 (16.1)	0.542		
	Contemplation (1–15)	4.9 (2.1)	6.9 (3.4)	0.000		
	Prepared for action–self evaluative (1–10)	12.1 (1.9)	8.7 (2.9)	0.000		
	Prepared for action–behavioral (1–15)	6.8 (1.8)	5.3 (2.5)	0.000		
		9.8 (2.2)	9.4 (3.2)	0.302		

^a*P* values are the result of *t* tests and chi-square tests for univariate associations between participants and non-participants^b*N* and calculated percentages may approach or exceed the total *N* and 100 % because of missing values or rounding differences

Table 2 Multivariable model of factors associated with (non-)participation of cancer survivors with job loss in the supportive RTW program

Group	Factor	Categories	Odds ratio (95 % CI)	P value
Socio-demographics	Marital status	Living alone	Ref.	
		Married	0.23 (0.08–0.69)	0.009
		Living together	0.25 (0.07–0.96)	0.044
		Divorced/widowed	0.82 (0.18–3.67)	0.790
Work-related factors	Type of employment contract prior to loss of employment	Fixed employment contract	Ref.	
		Temporary employment contract	2.60 (1.20–5.63)	0.016
		Temporary agency work contract	2.41 (0.71–8.17)	0.157
		Other type of contract	0.24 (0.25–2.38)	0.224
	Intention to RTW	Uncertain or no intention to RTW;	Ref.	
		Clear intention to RTW	2.65 (1.20–5.82)	0.015
	Readiness to RTW stage 2: contemplation ^a		2.00 (1.65–2.40)	0.000
Readiness to RTW stage 3: prepared for action–self evaluative ^a		1.27 (1.04–1.54)	0.017	

The model is based on 261 CSs, because of missing values

^a Higher score in this stage is associated with a higher chance of participation in the RTW program

participate than CSs who had had a fixed employment contract prior to loss of employment (OR 2.60; 95 % CI 1.20–5.63). Also, CSs with a clear intention to RTW were significantly more likely to participate than CSs with no or an unclear intention to RTW (OR 2.65; 95 % CI 1.20–5.82). Finally, higher scores on the contemplation scale (OR 2.00; 95 % CI 1.65–2.40) and the prepared for action–self-evaluative scale (OR 1.27; 95 % CI 1.04–1.54) of the Readiness to RTW scale, meaning that a person is contemplating RTW or starting to prepare for RTW, were significantly associated with participation in the program. The Nagelkerke *R*-squared demonstrated that the model is of reasonable quality (*p* value 0.580).

Motives for declining participation in the supportive RTW program

The most frequently reported motives for declining participation were physical motives (50.4 %), e.g., experiencing physical limitations or still undergoing cancer treatment, and mental motives (36.3 %), e.g., experiencing anxiety or depression (Table 3). On over 40 % of the postcards, more than one motive for declining participation was listed.

Discussion

Main findings

The results of this study demonstrate that CSs who were unmarried and/or lived alone and who had a temporary employment contract prior to job loss, a clear intention to RTW, and

higher scores on the contemplation scale and the prepared for action–self-evaluative scale of the Readiness to RTW scale were more likely to participate. Physical and mental problems were the main reasons for declining participation.

Interpretation of the findings

Non-participants (one-time questionnaire and postcard only) and participants in this study were significantly older than CSs who did not respond to the invitation at all. Previous studies have that shown that younger CSs are more likely to RTW [16, 35–37]. In the general population, younger persons are less challenged in finding new employment and may need less support, compared to older persons [38]. This might be true for CSs as well. That is, facing fewer RTW challenges than older CSs could explain why younger CSs were less interested to participate in a supportive RTW program. This could imply that supportive RTW interventions should be directed more toward the needs of older sick-listed workers [39].

Further, groups of non-participants (one-time questionnaire and postcard only) and participants included significantly higher proportions of breast CSs, compared to non-participants who did not respond to the invitation at all. This seems in line with previous studies, which also found that breast CSs participate frequently in supportive interventions [40, 41]. The relatively high number of breast CSs in our supportive RTW program may be partly explained by the generally favorable prognosis of breast cancer and relatively low impact on work ability, compared to other types of cancer in the occupational age [7].

CSs with job loss who were married or living together were less likely to participate in the RTW program than CSs who

Table 3 Motives for declining participation in the supportive RTW program

Motives	Non-participants <i>N</i> (% of 647)	Non-participants postcard <i>N</i> (% of 532) ^a	Non-participants questionnaire <i>N</i> (% of 115) ^b	<i>P</i> value ^c
Physical reasons	326 (50.4 %)	282 (53.0)	44 (38.3)	0.004
Mental reasons	235 (36.3 %)	210 (39.5)	25 (21.7)	0.000
Negative associations with RTW	87 (13.4 %)	78 (14.7)	9 (7.8)	0.051
Not willing to participate in a RCT	34 (5.3 %)	30 (5.6)	4 (3.5)	0.346
Personal reasons	27 (4.2 %)	23 (4.3)	4 (3.5)	0.681

CSs could indicate multiple motives for declining participation

^a Non-participants who returned the postcard, indicating reasons for declining participation

^b Non-participants who completed the one-time questionnaire

^c *P* values are the result of chi-square tests between the two groups of non-participants

lived alone. In line with our findings, an earlier study reported that married CSs are at risk for non-participation in supportive programs, compared to unmarried CSs [42]. Another study found that married CSs were more likely to leave the workforce compared to unmarried CSs, although this effect was only found for women [43]. Possibly, married CSs are discouraged to RTW by their spouse for protective reasons. Further, married CSs may not have financial motive for RTW, as their spouse may provide an additional source of income [43]. In these studies, job loss was not taken into account. Potentially, in our study, a lack of financial motive, or a protective attitude from a spouse, prevented married CSs from participation in the supportive RTW program. Conclusively, the factors determining participation of CSs who are married or living together may be more complex compared to factors influencing participation of CSs who are living alone.

CSs with a temporary employment contract prior to job loss were more likely to participate in the RTW program, compared to those with a fixed employment contract prior to job loss. It should be taken into account that, in the Netherlands, CSs with a temporary employment contract may experience job loss earlier in the cancer trajectory, as employers frequently do not renew an expiring temporary contract during sick leave [10, 15]. Consequently, CSs with a temporary employment contract may have had more urgent financial needs, less RTW support, and more time to consider and prepare for RTW, compared to CSs with a fixed employment contract [10]. This may make CSs with a temporary employment contract more inclined to participate.

A clear intention to RTW was associated with a higher chance of participation in the supportive RTW program. Another recent study indicated that intention to RTW is a strong predictor for actual RTW [9], although not specifically for CSs with job loss. Further, CSs with higher scores on the contemplation scale and the prepared for action–self-evaluative scale of the Readiness to RTW instrument were more

likely to participate in the RTW program. As the scales reflect contemplation of RTW and preparation for RTW [30], we hypothesize that, for CSs with job loss with higher scores on these scales, the invitation to participate in the RTW program arrived at a suitable moment.

Interestingly, there was a discrepancy between the multi-variable model, which included factors from the socio-demographic and work-related clusters, and the self-reported motives for declining participation, which were more health-related. Possibly, there are undetected differences with regard to health status between the non-participants (one-time questionnaire) and the non-participants who only returned the postcard. In this perspective, the multivariable model may represent CSs with job loss who have a relatively good health status.

Strengths and limitations

The strengths of this study are that data were used from CSs who were recruited on a national level and that a clustered hierarchical analysis approach was applied. The limitations of this study should be recognized as well. First, there is a risk of selection bias in our sample, which might affect generalizability, particularly with regard to CSs experiencing a worse health condition. That is, participants in the RTW program were screened on health-related criteria to determine eligibility for the RCT, while no screening was applied to non-participants, as there was little to no contact with those survivors. If the one-time questionnaire had also been completed by CSs who did not meet the inclusion criteria, this would have improved the generalizability of our results. Further, CSs who do not master the Dutch language may be underrepresented in this study, due to the exclusion criteria of the RCT. Finally, the results of this study should be interpreted in the context of the Dutch

social security system. Translating our results to other social security systems should be done cautiously.

Implications for future research and practice

Researchers and practitioners offering RTW support to CSs with job loss should take the presence of (financial) support from a spouse into account, as this may play an important role in the decision of CSs to receive RTW support [42, 43]. Further, in CSs who had a temporary employment contract, the need for RTW support should be monitored from the start of sick leave, in order to adequately intervene [44]. Practitioners should also inquire about the intention and perceived readiness to RTW [5]. This may facilitate the planning and execution of RTW, e.g., determining the time to RTW or gradual buildup of the workload [10]. Researchers recruiting CSs with job loss for supportive RTW programs should be aware of the role of physical and mental health problems as barriers for participation [17].

Conclusion

Marital status, type of employment contract, and motivational factors may influence CSs' participation in a supportive RTW program. Considering these factors may aid the identification of CSs who do not need RTW support and those who are in need of RTW support the most. Practitioners and researchers should take CSs' socio-demographic, health-related, and work-related characteristics into account, when offering RTW support. We recommend that future studies in CSs, or other patients with long-term or chronic conditions, collect data regarding (non-)participation. This information can be used to optimize recruitment strategies for supportive RTW programs, in order to provide sick-listed workers with the RTW support that they may need.

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Compliance with ethical standards

Informed consent Informed consent was obtained from all CSs completed the baseline questionnaire or the one-time questionnaire, as an informed consent form was attached to both questionnaires. For CSs who were included in the non-response analyses, data regarding age, gender, and cancer diagnosis were obtained through the SSA registries. For the use of these anonymous data, informed consent was not obtained. This study was approved by the Medical Ethics Committee of the VU University Medical Center, Amsterdam, The Netherlands.

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